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Thresholds for inflationary stimulated Raman scattering driven by broadband lasers in shock-ignition SJ SPENCER, TOM GOFFREY, TONY ARBER, University of Warwick, Coventry, UK — In the shock-ignition inertial confinement fusion (ICF) scheme, high-intensity lasers propagate through a long scale-length coronal plasma where back-scattered stimulated Raman scattering (bSRS) is likely to be in the kinetic regime. For a monochromatic laser source, the authors have found that inflationary SRS (iSRS) has an intensity threshold that depends on the density scale-length. This threshold is always below $4 \times 10^{15}\mathrm{W/cm}^2$ for shock-ignition plasma parameters. Previous work[1] has shown that bandwidth of the order $\Delta\omega_0 \sim 10^{-2}\omega_0$ reduces SRS reflectivity in large scale inhomogeneous plasmas. In this work, the *EPOCH* particle-in-cell code is used to perform fully kinetic simulations, to examine the effect of broadband lasers on iSRS. Since potential shock-ignition designs vary widely across facilities, we focus on how the effects of a broadband driver on inflationary SRS scale with density scale-length and laser intensity. [1] Yao Zhao *et al.* 2019 *Plasma Phys. Control. Fusion* **61** 115008

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